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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,050	02/19/2004	Richard F. Gladney	SMCY-P03-098	5733
28120	7590	11/07/2005	EXAMINER	
FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			SANTOS, ROBERT G	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/782,050

Applicant(s)

GLADNEY ET AL.

Examiner

Robert G. Santos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03/02/2005, 08/10/2005 & on 09/13/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 and 22-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 22-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03022005, 09132005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-6, 9, 22 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and U.S. Pat. No. 149,758 to Junge. With regards to claims 1, 2, 4-6, 9, 25 and 26, Collom '658 is considered to show all of the limitations as recited in these claims except for a condition wherein each coil spring comprises four or more active coils, at least two twisted wire strands formed from the same material and an encasing material formed around the first helical spring. Buckley '715 provides the basic teaching of a coil spring comprising four or more active coils and at least two twisted wire strands formed from the same material (see page 1, lines 35-43), whereas Junge '758 provides the basic teaching of a coil spring assembly (A, A<sup>2</sup>) including an encasing material (B, d) formed around a first helical spring (c, c<sup>2</sup>). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658 with a plurality of coil springs each comprising at four or more active coils and at least two twisted wire strands formed from the same material so "that they will possess greater elasticity and durability, and will be far more reliable and exact in their working than single springs are" (see Buckley '715, page 1, lines 30-34); the skilled artisan would have also found it obvious at the time the

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invention was made to provide the coil spring assembly of Collom '658 with an encasing material formed around the first helical spring in order to provide a simple means for protecting each helical spring and for imparting enhanced user comfort. With further regards to claim 1, although Collom '658 as modified by Buckley '715 and Junge '758 does not specifically disclose a condition wherein each spring has a free length of at least about four inches, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the coil spring assembly of Collom '658 as modified by Buckley '715 and Junge '758 with a plurality of springs each having a free length of at least about four inches since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). As concerns claims 22, 24, 27 and 28, Buckley '715 further teaches conditions wherein the plurality of strands as well as the active coils all have approximately equal outside diameters (see Figures 13, 14, 23 & 24), wherein the first and second active coils each have an outside diameter larger than at least one of the active coils located intermediate to the first and second active coils (see Figure 7), and wherein the active coils have approximately equal pitch (see Figures 13, 14, 23 & 24); the skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658 with a plurality of strands and active coils all having approximately equal outside diameters, a plurality of springs each having first and second active coils with an outside diameter larger than at least one of the active coils located intermediate to the first and second active coils, and active coils having approximately equal pitch since these types of spring configurations are well known in the art as taught by Buckley '715.

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3. Claims 10-12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and Junge '758, and further in view of Rhinelanders '475. Collom '658, as modified by Buckley '715 and Junge '758, do not specifically teach conditions wherein at least one of the plurality of strands or at least one of the segments of at least one of the plurality of strands is formed from a different material than at least one other of the plurality of strands or of at least one other of the plurality of segments, and wherein at least one of the plurality of strands has an outside diameter different from that of at least one other of the plurality of strands. Rhinelanders '475 provides the basic teaching of a coil spring formed from a plurality of strands (a) twisted together, wherein at least one of the plurality of strands or at least one of the segments of at least one of the plurality of strands is formed from a different material than at least one other of the plurality of strands or of at least one other of the plurality of segments (as described in column 2, lines 15-23), and wherein at least one of the plurality of strands has an outside diameter different from that of at least one other of the plurality of strands (as described in column 1, lines 16-19). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715 and Junge '758, with at least one of the plurality of strands or at least one of the segments of at least one of the plurality of strands being formed from a different material than at least one other of the plurality of strands or of at least one other of the plurality of segments, and at least one of the plurality of strands having an outside diameter different from that of at least one other of the plurality of strands in order to impart a specific measure of resiliency and durability to each helical spring as desired (see Rhinelanders, column 2, lines 20-23).

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4. Claims 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and Junge '758 and further in view of Sitton '097. Collom '658, as modified by Buckley '715 and Junge '758, does not specifically disclose a condition wherein the stranded wires are provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating. Sitton '097 provides the basic teaching of a coil spring (W) provided with a coating formed from an epoxy plastic compound. The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715 and Junge '758, with stranded wires provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating in order to provide coil springs which are corrosion-resistant, thereby extending the service life of the mattress assembly.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and Junge '758 and further in view of Donnelly et al. '681. Collom '658, as modified by Buckley '715 and Junge '758, does not specifically disclose a condition wherein at least one of the plurality of strands includes an anodizing surface treatment. Donnelly et al. '681 provide the basic teaching of applying an anodizing surface treatment to metal (as described in column 2, lines 23-35 and in column 3, lines 20-40). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715 and Junge '758, with at least one of the plurality of strands including an anodizing surface treatment in order to render the coil spring assembly

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“substantially less susceptible to corrosion, delamination and other environmentally and stress-induced failures” (see Donnelly et al. '681, column 1, lines 6-15).

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and Junge '758 and further in view of Sim '344. Collom '658, as modified by Buckley '715 and Junge '758, does not specifically disclose a condition wherein the plurality of strands is fastened together at a plurality of locations along the multi-strand cord. Sim '344 provides the basic teaching of a coil spring assembly comprising a plurality of springs (e) each having a number of strands “bound together at intervals by metal binders (i)” (see Sim '344, page 1, lines 26-28). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715 and Junge '758, with a plurality of strands fastened together at a plurality of locations along the multi-strand cord in order to strengthen the structural integrity of each spring, thereby extending the service life of the coil spring assembly.

7. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and Junge '758 and further in view of Codos '383. Collom '658, as modified by Buckley '715 and Junge '758, does not specifically disclose a condition wherein a pitch between first and second ones of the active coils is different from a pitch between second and third ones of the active coils. Codos '383 provides the basic teaching of a mattress assembly (10) comprising coil springs of varying spring rates. The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658, as

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modified by Buckley '715 and Junge '758, with a plurality of springs wherein a pitch between first and second ones of the active coils of each spring is different from a pitch between second and third ones of the active coils in order to create a mattress that includes different firmness zones, thereby providing greater specialized user support as desired.

8. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715 and Junge '758 and further in view of Summers '751. Collom '658, as modified by Buckley '715 and Junge '758, does not specifically disclose the use of a second helical spring located concentrically inside and attached to the first helical spring. Summers '751 provides the basic teaching of a coil spring assembly comprising a plurality of second helical springs (2) located concentrically inside and attached to a plurality of first helical springs (1). The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715 and Junge '758, with the use of a second helical spring located concentrically inside and attached to the first helical spring in order to provide additional support to a user positioned thereon, thereby helping to ensure enhanced user comfort.

***Response to Amendment***

9. Applicants' arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.



*Allowable Subject Matter*

10. Claims 3, 7, 8 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The skilled artisan would have found it obvious at the time the invention was made to provide the coil spring assembly of Collom '658, as modified by Buckley '715 and Junge '758, with a plurality of strands which are braided together and fastened together at least at one end as claimed since these limitations contradict the teachings disclosed in these references (see Buckley '715, page 1, line 102 and page 2, lines 1-7).

*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gladney '899 and Kliger '143.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert G. Santos whose telephone number is (571) 272-7048. The examiner can normally be reached on Tues-Fr and first Mondays, 10:30 a.m. to 8:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571) 272-7049. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Robert G. Santos  
Primary Examiner  
Art Unit 3673

R.S.  
November 2, 2005